

What Is Claimed Is:

1. An optical imaging system comprising a system (1) of optical components for generating an image of a surface (20.1) of a component (20) which emits light which is radially symmetrical, at least in part, for an optical surface measurement thereof, the surface normal of the radially symmetrical region in the measuring position of the component being inclined at a maximum angle of  $90^\circ$  with respect to the component axis, wherein the system (1) is designed for measuring outer surfaces (20.1), and includes a mirror (2) which can be associated with the component (20) and which in measuring mode captures the portion of the beam emitted from the radially symmetrical region of the surface to be measured and supplies same to additional imaging components in the system (1) for processing the image.
2. The imaging system as recited in Claim 1, wherein the mirror (2) has a radially symmetrical design, at least in part, and in measuring mode is designed and positioned for directly receiving the light emitted from the region.
3. The imaging system as recited in Claim 1 or 2, wherein the mirror (2) has a circumferential radially symmetrical design and a central opening (2.2), and a reflecting optical element (3) situated in the beam path downstream from the mirror (2) receives the light reflected from the mirror (2) and directs the light through the central opening (2.2).
4. The imaging system as recited in Claim 3, wherein the reflecting optical element (3) likewise has a radially symmetrical design and a central opening (3.2).

5. The imaging system as recited in Claim 3 or 4,  
wherein lens elements (4, 5) for processing the image are  
provided in the beam path downstream from the reflecting  
optical element (3).
6. The imaging system as recited in one of the preceding  
claims,  
wherein the system (1) is designed to generate an image  
that can be interferometrically evaluated.
7. The imaging system as recited in one of the preceding  
claims,  
wherein the system (1) has a two-dimensional image  
recorder (6) on which the imaging occurs.
8. The imaging system as recited in one of Claims 1 through  
6,  
wherein the system (1) is designed as an object arm of an  
interferometric measuring system.
9. The imaging system as recited in Claim 8,  
wherein the system (1) is designed to generate an  
intermediate image.
10. The imaging system as recited in one of Claims 1, 2, or 4  
through 9,  
wherein a transmissive optical element is provided  
directly downstream from the mirror (2) for receiving the  
beam reflected from the mirror.